Montana Department of Natural Resources and Conservation
Water Resources Division
Water Rights Bureau

ENVIRONMENTAL ASSESSMENT
For Routine Actions with Limited Environmental Impact

Part I. Proposed Action Description

1. Applicant/Contact name and address: Big Horn Conservation District, 724 West 3rd St., Hardin, MT 59034

2. Type of action: Conservation District Application to Change Water Reservation #43P 30122803

3. Water source name: Bighorn River

4. Location affected by project: Sections 3, 9, and 10, T3S, R33E, Big Horn County

5. Narrative summary of the proposed project, purpose, action to be taken, and benefits: This application is to add a place of use to the Big Horn Conservation District Water Reservation water right (43P 9952-00). A flow rate of 1.75 CFS (785 GPM) and a maximum volume of 360 AF/YR of the Big Horn CD water reservation will be used for center pivot irrigation on 100.0 acres (7.85 GPM/AC and 3.6 AF/AC). The proposed place of use is approximately 17 miles northeast of St. Xavier, MT and includes 57 AC in S2SW and 2 AC in W2SWSE Section 3 and 41 AC in N2NW Section 10, T3S, R33E, Big Horn County. The 1.75 CFS will be diverted from the Bighorn River by a headgate that feeds the Crow Irrigation Project Big Horn Canal in SENENW Section 16, T6S, R31E. The DNRC shall issue a change authorization if an applicant proves the criteria in 85-2-402 MCA are met.

6. Agencies consulted during preparation of the Environmental Assessment:
(include agencies with overlapping jurisdiction)
Montana Department of Natural Resources and Conservation
Montana Department of Fish, Wildlife and Parks
Montana Department of Environmental Quality
Montana Sage Grouse Habitat Conservation Program
Montana Natural Heritage Program
United States Natural Resource Conservation Service
United States Fish and Wildlife Service

Part II. Environmental Review

1. Environmental Impact Checklist:

PHYSICAL ENVIRONMENT

WATER QUANTITY, QUALITY AND DISTRIBUTION

Water quantity **–** The Bighorn River is listed as periodically dewatered between miles 42.04 and 83.73 (Yellowtail Afterbay Dam to confluence with the Little Bighorn River) by the Montana Department of Fish, Wildlife and Parks. The proposed use will take Conservation District water reserved for irrigation use as planned. The Big Horn Canal diversion is directly from the reservoir behind the Yellowtail Afterbay Dam and independent of flow in the Bighorn River which is set by United States Bureau of Reclamation releases from Yellowtail Dam. Addition of 1.75 CFS flow rate of water reserved for irrigation use to diversions in the Big Horn Canal will not alter periodic dewatering conditions in the Bighorn River.

Determination: No significant impact

Water quality **–** The Bighorn River in Big Horn County is not listed as water quality threatened by the Montana Department of Environmental Quality. Water in the river is classified as suitable for drinking after conventional treatment (B2). The only aspect of the river that is noted as impaired is high Mercury and Lead concentrations of unknown origin. Otherwise the river supports other uses. Use of Bighorn River water for high efficiency center pivot sprinkler irrigation will not alter the water quality. High efficiency irrigation minimizes the potential for return flows that may carry fertilizer or other pollutants. The place of use for this project is approximately 2 miles from the river and substantial return flows are unlikely.

Determination: No significant impact

Groundwater **–** Irrigation using water from the Bighorn River has no likely effect on groundwater quality or quantity. Infiltration of irrigation water may locally increase the availability of groundwater.

Determination: No significant impact

DIVERSION WORKS – The diversion works from the Bighorn River is in place and operational. The project proposes to use the existing Crow Irrigation Project (Big Horn Canal) headgate and a portion of the existing canal. No modifications to the channel, flow characteristics or riparian areas are predicted. No barriers will be created, no wells drilled, or dams emplaced.

Determination: No impact

UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES

Endangered and threatened species **–** According to the Montana Natural Heritage Program, there are 6 animal species of concern and no plant species of concern in the proposed project area. The animal species are the Black-tailed Prairie Dog, the Great Blue Heron, the Greater Sage Grouse, the Loggerhead Shrike, the Long-billed Curlew and the Sauger. The proposed project involves no work in or near the river because the diversion works are in place. The habitat is currently agricultural land and would not change. No barriers to migration or movement of any species are predicted. The installation of pipelines to the proposed pivots is the only proposed disturbance and is also entirely within currently agricultural land. Although the

Greater Sage Grouse is listed by the Montana Natural Heritage Program, no part of the proposed project lies within Sage Grouse habitat as mapped by the Montana Sage Grouse Habitat Conservation Program.

Determination: No significant impact

Wetlands – There are no wetlands in the proposed project area and none are proposed.

Determination: No impact

Ponds – There is a single pond in the project area which is proposed as the secondary diversion from the Big Horn Canal. No ponds are proposed and no modification to the existing pond is necessary.

Determination: No Impact

GEOLOGY/SOIL QUALITY, STABILITY AND MOISTURE – Mapping by the United States Natural Resources Conservation Service shows that the dominant soil in the project area is Kyle silty clay. Kyle silty clay is a well-drained moderately saline to very slightly saline soil. Saline seep is unlikely and no alteration of soil stability or quality is predicted from irrigation.

Determination: No significant impact

VEGETATION COVER, QUANTITY AND QUALITY/NOXIOUS WEEDS – Existing vegetative cover is agriculture. Irrigation would improve the quality and quantity of existing cover. Installation of pipelines and pivots provides an opportunity for the establishment or spread of noxious weeds. It will be the responsibility of the land owner to monitor and control noxious weeds.

Determination: No significant impact

AIR QUALITY – Irrigation of existing agricultural ground has not potential to adversely affect air quality.

Determination: No impact

HISTORICAL AND ARCHEOLOGICAL SITES – The proposed project is not located on State or Federal Lands.

Determination: Not Applicable

DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AND ENERGY – The only additional demand on environmental resources not discussed above would be the power supply to operate the center pivot sprinkler system.

Determination: No significant impact

HUMAN ENVIRONMENT

LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS – There are no known locally adopted environmental plans or goals.

Determination: Not Applicable

ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES – The proposed project is currently roadless agricultural land removed from any recreational or wilderness areas. No access to recreational or wilderness areas exists at present and none is proposed.

Determination: No impact

HUMAN HEALTH – Irrigation of existing agricultural land has no potential to adversely affect human health.

Determination: No impact

PRIVATE PROPERTY - *Assess whether there are any government regulatory impacts on private property rights.*
*Yes___ No_**X**__ If yes, analyze any alternatives considered that could reduce, minimize, or eliminate the regulation of private property rights.*

Determination: No impact

OTHER HUMAN ENVIRONMENTAL ISSUES - *For routine actions of limited environmental impact, the following may be addressed in a checklist fashion.*

Impacts on:

(a) *Cultural uniqueness and diversity?* No significant impact

(b) *Local and state tax base and tax revenues?* No significant impact

(c) *Existing land uses?* No significant impact

(d) *Quantity and distribution of employment?* No significant impact

(e) *Distribution and density of population and housing?* No significant impact

(f) *Demands for government services?* No significant impact

(g) *Industrial and commercial activity?* No significant impact

(h) *Utilities?* No significant impact

(i) *Transportation?* No significant impact

(j) *Safety?* No significant impact

(k) *Other appropriate social and economic circumstances?* No significant impact

2. ***Secondary and cumulative impacts on the physical environment and human population:***

Secondary Impacts: No secondary impacts are recognized.

Cumulative Impacts: No cumulative impacts are recognized.

3. ***Describe any mitigation/stipulation measures:*** None

4. ***Description and analysis of reasonable alternatives to the proposed action, including the no action alternative, if an alternative is reasonably available and prudent to consider:*** The only reasonable alternative to the proposed project is the no-action alternative. The no-action alternative prevents the land owner from utilizing his agricultural land to full potential and prevents the Conservation District from fulfilling their goal of utilizing reserved water for irrigation. The no-action alternative does not prevent or mitigate any significant environmental impacts.

PART III. Conclusion

1. ***Preferred Alternative:*** Issue a change authorization if an applicant proves the criteria in 85-2-402 MCA are met.

2 ***Comments and Responses:*** None

3. ***Finding:***
*Yes___ No_**X**__ Based on the significance criteria evaluated in this EA, is an EIS required?*

If an EIS is not required, explain why the EA is the appropriate level of analysis for this proposed action: This environmental assessment found no significant environmental impacts likely to occur from the proposed project and is therefore the appropriate level of analysis.

Name of person(s) responsible for preparation of EA:

Name: Mark Elison
Title: Regional Manager
Date: 4/15/2019